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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,389	02/17/2004	Chih C. Lin	024-35580	1612

7590 09/02/2005  
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EXAMINER

THOMPSON, KENNETH L

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/780,389

Applicant(s)

LIN, CHIH C.

Examiner

Kenneth Thompson

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 12-15 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 16 is/are rejected.
- 7) ☒ Claim(s) 3-9,11 and 17-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/08 2/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 11, 18 and 19 are objected to because of the following informalities: The first recitation "of" in claim 11, line 3 should be changed to "from". Claims 18, have a similar recitation. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Oliver et al., U.S. 5,056,610.

Regarding claim 1, Oliver et al. discloses a body (10) having a leg (14) with a bearing pin (18) depending therefrom, a cone (28) rotatably mounted on the bearing pin, the cone having a back face region (at 30) having an annular wall (30) spaced radially outward from a seal gland (21); and a diverter (38) having a wedge-shaped head (40,41) extending alongside the annular wall of the back face region and facing into the direction of rotation of the cone to divert debris from the seal gland (col. 3, lines 63-66).

As to claim 2, Oliver et al. discloses the head of the diverter (41,40) has an inner side (40) that substantially follows a contour (the plane of 30) of the annular wall (30) of the back face region.

Regarding claim 16, Oliver et al. discloses body (10), a leg (14) a bearing pin (18) depending therefrom, a cone (28) rotatably mounted on the bearing pin, the cone having a back face (30) spaced from the bit leg by a clearance (between 17 and 30); and a diverter (38) having a base (39) mounted in a hole (36) in the bit leg and a head (41,40) protruding therefrom in the clearance, the head having a leading side (41) and a trailing side (side of 39 opposite 41), the leading side being of a narrower width than the trailing side, measured along a radial line emanating from an axis of the bearing pin.

***Allowable Subject Matter***

Claims 10 and 12-15 are allowed.

Claim 11 would be allowable if rewritten to overcome the objections set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 3-9 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest all the claimed subject matter including the diverter has an inner side that is spaced from the annular wall of the back face region by a substantially uniform width clearance.

The prior art of record does not disclose or suggest all the claimed subject matter including the diverter has an inner side that is substantially perpendicular to a radial line emanating from an axis of the bearing pin.

The prior art of record does not disclose or suggest all the claimed subject matter including the head of the diverter having an inner side and an outer side that diverge from each other.

The prior art of record does not disclose or suggest all the claimed subject matter including the outer side being oblique relative to the annular wall.

The prior art of record does not disclose or suggest all the claimed subject matter including the trailing side having a greater width than the leading side.

The prior art of record does not disclose or suggest all the claimed subject matter including the diverter having a cylindrical base having an innermost portion that is spaced closer to an axis of the bearing pin than the annular wall of the back face region.

The prior art of record does not disclose or suggest all the claimed subject matter including the cone having a back face region with a flat inner portion and a flat outer portion separated by an annular wall.

The prior art of record does not disclose or suggest all the claimed subject matter including the distance from the leading side to the trailing side is substantially equal to a diameter of the base.

The prior art of record does not disclose or suggest all the claimed subject matter including a radial line from the axis of the bearing pin passes obliquely through the outer side.

The prior art of record does not disclose or suggest all the claimed subject matter including the inner side being perpendicular to a radial line of the axis of the bearing pin.

The prior art of record does not disclose or suggest all the claimed subject matter including head being generally triangular shaped.

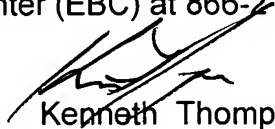
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Thompson whose telephone number is 571 272-7037. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

30 August 2005

  
Kenneth Thompson  
Primary Examiner  
Art Unit 3672